

3.6 Scenario Analysis Summary

As demonstrated in the previous section, any of the proposed scenarios generally improve conditions when compared to the 2040 No-Build. In comparing the three project-based scenarios to each other, overall differences can be summarized as per *Exhibit 3.6.1*.

Exhibit 3.6.1 - Overall Summary of Scenario-Specific Project Variations

Scenario Differences	Assumptions		
	2040 Scenario 1 Future Baseline	2040 Scenario 2 Operations Focus	2040 Scenario 3 Multimodal Focus
Traffic Signal Improvements	Includes Candidates #2-5, 10, and 39; or ≈ 80 signals plus a countywide emergency preemption program	Includes Scenario 1 improvements shown to left Adds Candidate #9, or ≈ 290 additional signal improvements countywide	Includes Scenario 1 improvements shown to left
Targeted Intersection Improvements	Includes several Candidates, such as: #7, 11, 12, 14, 19, 21-24, 26, 29-32, 35, and 49.	Includes Scenario 1 improvements shown to left; Adds \$30 million additional targeted intersection improvements, or ≈ 10-15 priority locations countywide*	Includes Scenario 1 improvements shown to left
Ped / Bike / Trail Improvements	Includes several Candidates, such as: #1, 13, 17, and 24; plus any future additions via remaining Transportation Enhancements line-items	Includes Scenario 1 improvements shown to left	Includes Scenario 1 improvements shown to left Adds Candidates #45, 47, and 55, or ≈ 25 to 35 additional miles of sidewalk or multiuse trail via Bayfront, Erie Metro, or Countywide programs
Transit Improvements	Includes Candidate #57, plus any operating assumptions that would be tracked separately under transit-specific FTA funding	Includes Scenario 1 improvements shown to left	Includes Scenario 1 improvements shown to left Adds Candidate #68, or ≈ 10% ridership increase via assumptions that existing non-daily service (i.e., County Routes) are converted to daily service
Projects Removed vs. Scenario 1	N/A	Removes Candidates #37, 42, 52-54, 62, and 64	Removes Candidates #37, 50, 53, 54, 62, and 64

* Candidate project numbers in the table above reference the Decision Lens Rankings per previous Exhibits 3.4.2-3.4.5.

With potential benefits in all three scenarios, selection of a preferred scenario (or of preferred elements from a combination of scenarios) essentially becomes a matter of comparing the advantages of each scenario based on the same six categories utilized throughout this plan. (*Exhibit 3.6.2*)

- **Economic Vitality** – Scenario 2 generally provides more of an advantage in terms of the additional delay reductions and targeted intersection improvements that would benefit all vehicular travel, including heavy truck traffic used for goods movement.
- **Multimodal Transportation Safety** – All scenarios generally provide some level of benefit with additional improvements versus the 2040 No-Build.
- **Multimodal Transportation Security** – Scenario 2 generally provides more of an advantage in terms of the additional signal efficiencies that would be provided along established emergency detour routes, as well as a greater potential for improving emergency response times, emergency preemption, ITS infrastructure, or similar operational elements.
- **Multimodal Choices and Connections** – Scenario 3 provides a notable advantage in terms of the additional multimodal pedestrian, bicycle, trail, and transit opportunities that the policy-level shift in funding would be able to provide.
- **System Sustainability and Livability** – Scenarios 2 and 3 both provide notable advantages in terms of improving access throughout the county, meshing with local planning goals, and supporting Smart Transportation principles.
- **System Efficiency and Preservation** – Scenario 2 provides a notable advantage in terms of the additional traffic signal improvements and targeted intersection improvements as they relate directly to maintaining and operating the overall system, as well as a general bottleneck reduction philosophy.

Exhibit 3.6.2 - Overall Summary of Scenario-Specific Advantages by Evaluation Category

Evaluation Category	Decision Lens Weighting	Scenario "Relative Advantage"		
		2040 Scenario 1 Future Baseline	2040 Scenario 2 Operations Focus	2040 Scenario 3 Multimodal Focus
Economic Vitality	19.6%	✓	✓✓	✓
Multimodal Transportation Safety	20.1%	✓	✓	✓
Multimodal Transportation Security	6.8%	✓	✓✓	✓
Multimodal Choices and Connections	11.5%	✓	✓	✓✓✓
System Sustainability and Livability	18.4%	✓	✓✓	✓✓
System Efficiency and Preservation	23.6%	✓	✓✓✓	✓

✓ = Advantage vs. No-Build; ✓✓ = Advantage vs. No-Build and other scenarios; ✓✓✓ = Notable advantage vs. No-Build and other scenarios

Considering the above, Scenarios 2 or 3 improve conditions and meet the County's overall transportation goals more so than the No-Build or the Scenario 1. Scenario 2 provides a slight additional advantage versus Scenario 3 given its more favorable results in the heavily-weighted categories of Economic Vitality (19.6%) or System Efficiency and Preservation (23.6%). Scenario 3 does provide distinct benefits under Multimodal Choices and Connections, although that category is weighted lower (11.5%) compared to other evaluation categories.